

Contents

Volume 109 1990

ESSAY IN DEVELOPMENT

Brown, N. A. and Wolpert, L.

The development of handedness in left/right asymmetry

Jessen, K. R., Morgan, L., Stewart, H. J. S. and Mirsky, R.

Three markers of adult non-myelin-forming Schwann cells, 217c(Ran-1), A5E3 and GFAP: development and regulation by neuron-Schwann cell interactions

91

CONTRIBUTED PAPERS

Foerster, P., Müller, S. C. and Hess, B.

Curvature and spiral geometry in aggregation patterns of *Dictyostelium discoideum*

11

Copenhaver, P. F. and Taghert, P. H.

Neurogenesis in the insect enteric nervous system: generation of premigratory neurons from an epithelial placode

17

Heine, U. I., Munoz, E. F., Flanders, K. C., Roberts, A. B. and Sporn, M. B.

Colocalization of TGF-beta 1 and collagen I and III, fibronectin and glycosaminoglycans during lung branching morphogenesis

29

Dolci, S. and De Felici, M.

A study of meiosis in chimeric mouse fetal gonads

37

Jones, R. and Williams, R. M.

Identification of zona- and fucoidan-binding proteins in guinea-pig spermatozoa and mechanism of recognition

41

Ralphs, J. R., Wylie, L. and Hill, D. J.

Distribution of insulin-like growth factor peptides in the developing chick embryo

51

Fawcett, J. W. and Housden, E.

The effects of protease inhibitors on axon growth through astrocytes

59

Senior, P. V., Byrne, S., Brammar, W. J. and Beck, F.

Expression of the IGF-II/mannose-6-phosphate receptor mRNA and protein in the developing rat

67

Maden, M., Ong, D. E. and Chytil, F.

Retinoid-binding protein distribution in the developing mammalian nervous system

75

Richardson, M. K., Hornbruch, A.

and Wolpert, L.

Mechanisms of pigment pattern formation in the quail embryo

81

Jessen, K. R., Dubois, C., Morgan, L. and Mirsky, R.

04 and A007-sulfatide antibodies bind to embryonic Schwann cells prior to the appearance of galactocerebroside; regulation of the antigen by axon-Schwann cell signals and cyclic AMP

105

Mirsky, R., Dubois, C., Morgan, L. and Jessen, K. R.

04 and A007-sulfatide antibodies bind to embryonic Schwann cells prior to the appearance of galactocerebroside; regulation of the antigen by axon-Schwann cell signals and cyclic AMP

117

Ozil, J. P.

The parthenogenetic development of rabbit oocytes after repetitive pulsatile electrical stimulation

129

Kaneko, H., Takaichi, S., Yamamoto, M. and Dan-Sohkawa, M.

Acellularity of starfish embryonic mesenchyme cells as shown *in vitro*

139

Hinterberger, T. J. and Barald, K. F.

Fusion between myoblasts and adult muscle fibers promotes remodeling of fibers into myotubes *in vitro*

149

Johnson, A. D. and Smith, L. D.

In vivo regulation of MPF in *Xenopus* oocytes

157

Snape, A. M., Jonas, E. A. and Sargent, T. D.

KTF-1, a transcriptional activator of *Xenopus* embryonic keratin expression

167

Palka, J., Schubiger, M. and Schwaninger, H.

Neurogenic and antineurogenic effects from modifications at the *Notch* locus

177

Arsanto, J.-P., Diano, M., Thouveny, Y., Thiery, J. P. and Levi, G.

Patterns of tenascin expression during tail regeneration of the amphibian urodele

Pleurodeles waltl

189

Takagi, N. and Abe, K.

Detrimental effects of two active X chromosomes on early mouse development

Contents

Kalcheim, C. and Neufeld, G. Expression of basic fibroblast growth factor in the nervous system of early avian embryos	203	Gaunt, S. J., Coletta, P. L., Pravtcheva, D. and Sharpe, P. T. Mouse <i>Hox</i> -3.4: homeobox sequence and embryonic expression patterns compared with other members of the <i>Hox</i> gene network	329
Loughna, P. T., Izumo, S., Goldspink, G. and Nadal-Ginard, B. Disuse and passive stretch cause rapid alterations in expression of developmental and adult contractile protein genes in skeletal muscle	217	Richman, J. M. and Crosby, Z. Differential growth of facial primordia of chick embryos: responses of facial mesenchyme to basic fibroblast growth factor (bFGF) and serum in micromass culture	341
Wright, C. V. E., Morita, E. A., Wilkin, D. J. and De Robertis, E. M. The <i>Xenopus</i> XIHbox 6 homeo protein, a marker of posterior neural induction, is expressed in proliferating neurons	225	Hatzopoulos, A. K., Stoykova, A. S., Erselius, J. R., Goulding, M., Neuman, T. and Gruss, P. Structure and expression of the mouse Oct2a and Oct2b, two differentially spliced products of the same gene	349
Gridley, T., Gray, D. A., Orr-Weaver, T., Soriano, P., Barton, D. E., Francke, U. and Jaenisch, R. Molecular analysis of the <i>Mov 34</i> mutation: transcript disrupted by proviral integration in mice is conserved in <i>Drosophila</i>	235	Stewart, R. M. and Gerhart, J. C. The anterior extent of dorsal development of the <i>Xenopus</i> embryonic axis depends on the quantity of organizer in the late blastula	363
ESSAY IN DEVELOPMENT			
Schoenwolf, G. C. and Smith, J. L. Mechanisms of neurulation: traditional viewpoint and recent advances	243	Weliky, M. and Oster, G. The mechanical basis of cell rearrangement. I. Epithelial morphogenesis during <i>Fundulus</i> epiboly	373
CONTRIBUTED PAPERS			
Mlodzik, M., Gibson, G. and Gehring, W. J. Effects of ectopic expression of <i>caudal</i> during <i>Drosophila</i> development	271	Mitran, E., Gruenbaum, Y., Shohat, H. and Ziv, T. Fibroblast growth factor during mesoderm induction in the early chick embryo	387
Molven, A., Wright, C. V. E., BreMiller, R., de Robertis, E. M. and Kimmel, C. B. Expression of a homeobox gene product in normal and mutant zebrafish embryos: evolution of the tetrapod body plan	279	Schlosshauer, B., Dütting, D. and Wild, M. Target-independent regulation of a novel growth associated protein in the visual system of the chicken	395
Reuter, R. and Scott, M. P. Expression and function of the homeotic genes <i>Antennapedia</i> and <i>Sex combs reduced</i> in the embryonic midgut of <i>Drosophila</i>	289	Rothman, T. P., Le Douarin, N. M., Fontaine-Pérus, J. C. and Gershon, M. D. Developmental potential of neural crest-derived cells migrating from segments of developing quail bowel back-grafted into younger chick host embryos	411
Harry, J. L., Williams, K. L. and Briscoe, D. A. Sex determination in loggerhead turtles: differential expression of two hnRNP proteins	305	Hay, B., Jan, L. Y. and Jan, Y. N. Localization of vasa, a component of <i>Drosophila</i> polar granules, in maternal-effect mutants that alter embryonic anteroposterior polarity	425
Probstmeier, R., Martini, R. and Schachner, M. Expression of J1/tenascin in the crypt-villus unit of adult mouse small intestine: implications for its role in epithelial cell shedding	313	Bovolenta, P. and Dodd, J. Guidance of commissural growth cones at the floor plate in embryonic rat spinal cord	435
Evsikov, S. V., Morozova, L. M. and Solomko, A. P. The role of the nucleocytoplasmic ratio in development regulation of the early mouse embryo	323	Fath, K. R., Obenauf, S. D. and Burgess, D. R. Cytoskeletal protein and mRNA accumulation during brush border formation in adult chicken enterocytes	449

Byers, M. R., Schatteman, G. C. and Bothwell, M.	
Multiple functions for NGF receptor in developing, aging and injured rat teeth are suggested by epithelial, mesenchymal and neural immunoreactivity	461
Kuo, C. F., Xanthopoulos, K. G. and Darnell, J. E. Jr	
Fetal and adult localization of C/EBP: evidence for combinatorial action of transcription factors in cell-specific gene expression	473
Thomas, K., del Mazo, J., Eversole, P., Bellvé, A., Hiraoka, Y., Li, S. S. L. and Simon, M.	
Developmental regulation of expression of the lactate dehydrogenase (LDH) multigene family during mouse spermatogenesis	483
Amanze, D. and Iyengar, A.	
The micropyle: a sperm guidance system in teleost fertilization	495
Nasr-Esfahani, M. H., Aitken, J. R. and Johnson, M. H.	
Hydrogen peroxide levels in mouse oocytes and early cleavage stage embryos developed <i>in vitro</i> or <i>in vivo</i>	501
ESSAY IN DEVELOPMENT	
Simpson, P.	
Lateral inhibition and the development of the sensory bristles of the adult peripheral nervous system of <i>Drosophila</i>	509
CONTRIBUTED PAPERS	
Rabacchi, S. A., Neve, R. L. and Dräger, U. C.	
A positional marker for the dorsal embryonic retina is homologous to the high-affinity laminin receptor	521
Perris, R., Löfberg, J., Fällström, C., von Boxberg, Y., Olsson, L. and Newgreen, D. F.	
Structural and compositional divergencies in the extracellular matrix encountered by neural crest cells in the white mutant axolotl embryo	533
Birmingham, Jr, J. R., Martinez-Arias, A., Petitt, M. G. and Scott, M. P.	
Different patterns of transcription from the two <i>Antennapedia</i> promoters during <i>Drosophila</i> embryogenesis	553
Larison, K. D. and BreMiller, R.	
Early onset of phenotype and cell patterning in the embryonic zebrafish retina	567
Stuart, G. W., Vielkind, J. R., McMurray, J. V. and Westerfield, M.	
Stable lines of transgenic zebrafish exhibit reproducible patterns of transgene expression	577
Fitzpatrick, D. R., Denhez, F., Kondaiah, P. and Akhurst, R. J.	
Differential expression of TGF beta isoforms in murine palatogenesis	585
Varnold, R. L. and Smith, L. D.	
Protein kinase C and progesterone-induced maturation in <i>Xenopus</i> oocytes	597
Hyldahl, L., Schofield, P. N. and Engström, W.	
Stimulatory effects of basic fibroblast growth factor on DNA synthesis in the human embryonic cornea	605
Layer, P. G. and Alber, R.	
Patterning of chick brain vesicles as revealed by peanut agglutinin and cholinesterases	613
Khaner, O. and Wilt, F.	
The influence of cell interactions and tissue mass on differentiation of sea urchin mesomeres	625
Lovell-Badge, R. and Robertson, E.	
XY female mice resulting from a heritable mutation in the primary testis-determining gene, <i>Tdy</i>	635
Gubbay, J., Koopman, P., Collignon, J., Burgoyne, P. and Lovell-Badge, R.	
Normal structure and expression of <i>Zfy</i> genes in XY female mice mutant in <i>Tdy</i>	647
Savatier, P., Morgenstern, J. and Beddington, R. S. P.	
Permissiveness to murine leukemia virus expression during preimplantation and early postimplantation mouse development	655
Stern, C. D.	
The marginal zone and its contribution to the hypoblast and primitive streak of the chick embryo	667
Barsh, G. S., Lovett, M. and Epstein, C. J.	
Effects of lethal yellow (<i>A^y</i>) mutation in mouse aggregation chimeras	683
Wolswijk, G., Riddle, P. N. and Noble, M.	
Coexistence of perinatal and adult forms of a glial progenitor cell during development of the rat optic nerve	691

Contents

Baker, P. J., Moore, H. D. M., Penfold, L. M., Burgess, A. M. C. and Mittwoch, U. Gonadal sex differentiation in the neonatal marsupial, <i>Monodelphis domestica</i>	699	Driever, W., Siegel, V. and Nüsslein-Volhard, C. Autonomous determination of anterior structures in the early <i>Drosophila</i> embryo by the <i>bicoid</i> morphogen	811
Twell, D., Yamaguchi, J. and McCormick, S. Pollen-specific gene expression in transgenic plants: coordinate regulation of two different tomato gene promoters during microsporogenesis	705	Becker, T. and Technau, G. M. Single cell transplantation reveals interspecific cell communication in <i>Drosophila</i> chimeras	821
Riley, B. B. and Barclay, S. L. Ammonia promotes accumulation of intracellular cAMP in differentiating amoebae of <i>Dictyostelium discoideum</i>	715	Lyons, K. M., Pelton, R. W. and Hogan, B. L. M. Organogenesis and pattern formation in the mouse: RNA distribution patterns suggest a role for <i>Bone Morphogenetic Protein-2A (BMP-2A)</i>	833
Fladby, T. and Jansen, J. K. S. Development of homogeneous fast and slow motor units in the neonatal mouse soleus muscle	723	Klein, R., Martin-Zanca, D., Barbacid, M. and Parada, L. F. Expression of the tyrosine kinase receptor gene <i>trkB</i> is confined to the murine embryonic and adult nervous system	845
Cabrera, C. V. Lateral inhibition and cell fate during neurogenesis in <i>Drosophila</i> : the interactions between <i>acute</i> , <i>Notch</i> and <i>Delta</i>	733	Xue, G. P., Calvert, R. A. and Morris, R. J. Expression of the neuronal surface glycoprotein Thy-1 is under post-transcriptional control, and is spatially regulated, in the developing olfactory system	851
Pourquié, O., Coltey, M., Thomas, J.-L. and Le Douarin, N. M. A widely distributed antigen developmentally regulated in the nervous system	743	Zak, N. B., Wides, R. J., Schejter, E. D., Raz, E. and Shilo, B.-Z. Localization of the <i>DER/fib</i> protein in embryos: implications on the <i>faint little ball</i> lethal phenotype	865
McCauley, M. M. and Hepler, P. K. Visualization of the endoplasmic reticulum in living buds and branches of the moss <i>Funaria hygrometrica</i> by confocal laser scanning microscopy	753	Hoppe, P. E. and Greenspan, R. J. The <i>Notch</i> locus of <i>Drosophila</i> is required in epidermal cells for epidermal development	875
Sharpe, C. R. and Gurdon, J. B. The induction of anterior and posterior neural genes in <i>Xenopus laevis</i>	765	Hobmayer, E., Holstein, T. W. and David, C. N. Tentacle morphogenesis in hydra. I. The role of head activator	887
Kress, C., Vogels, R., de Graaff, W., Bonnerot, C., Meijlink, F., Nicolas, J. F. and Deschamps, J. Hox-2.3 upstream sequences mediate lacZ expression in intermediate mesoderm derivatives of transgenic mice	775	Hobmayer, E., Holstein, T. W. and David, C. N. Tentacle morphogenesis in hydra. II. Formation of a complex between a sensory nerve cell and a battery cell	897
Dressler, G. R., Deutsch, U., Chowdhury, K., Nornes, H. O. and Gruss, P. <i>Pax2</i> , a new murine paired-box-containing gene and its expression in the developing excretory system	787	Smith, J. and McLachlan, J. C. Identification of a novel growth factor with transforming activity secreted by individual chick embryos	905
Nornes, H. O., Dressler, G. R., Knapik, E. W., Deutsch, U. and Gruss, P. Spatially and temporally restricted expression of <i>pax2</i> during murine neurogenesis	797	Orr-Urtreger, A., Avivi, A., Zimmer, Y., Givol, D., Yarden, Y. and Lonai, P. Developmental expression of <i>c-kit</i> , a proto-oncogene encoded by the <i>W</i> locus	911
		Smith-Thomas, L. C., Johnson, A. R. and Fawcett, J. W. The effects of embryonic retinal neurons on neural crest cell differentiation into Schwann cells	925

Contents

Williams, N. E., Honts, J. E. and Kaczanowska, J.	
The formation of basal body domains in the membrane skeleton of <i>Tetrahymena</i>	935
Biscoff, R.	
Interaction between satellite cells and skeletal muscle fibers	943
Crowther, R. J., Meedel, T. H. and Whittaker, J. R.	
Differentiation of tropomyosin-containing myofibrils in cleavage-arrested ascidian zygotes expressing acetylcholinesterase	953
Wolpert, L. and Hornbruch, A.	
Double anterior chick limb buds and models for cartilage rudiment specification	961
Sargent, M. G. and Bennett, M. F.	
Identification in <i>Xenopus</i> of a structural homologue of the <i>Drosophila</i> gene <i>snail</i>	967
Index of Authors and Titles	975
Subject Index	979